

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027824**Date Inspected:** 25-Jun-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

5E PP29.5 E2-DAH (Exterior)

This QA Inspector made random observations of SMAW on the root joint of the Deck Access Hole (DAH) at 5E PP29.5 E2-DAH on the exterior of the OBG. ABF/JV qualified welder Todd Jackson #4639 was observed welding in the 1G flat position using 3.2mm" diameter E7018-H4R electrodes. This QA Inspector observed QC Inspector Steve Jensen verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters (Amps) were in accordance with ABF-WPS-D1.5-1010-Revision 1. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes. This QA Inspector noted that the 3.2mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. At the time of the observations no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was in progress and appeared to be in general conformance with the contract documents.

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12E Corner Drop-In Panel

This QA Inspector randomly observed ABF personnel using the 4100 Ringer Crane, lift the corner drop-in panel from a storage barge, and place it on the OBG deck. The workers used bolts and pins to temporarily secure it in place. It was noted that the welding of the temporary attachment alignment fit-up gear commenced on this date. QC Salvador Merino was observed monitoring the welding and conducted fit-up operations. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location and appeared to be in general conformance with the contract documents.

13E Drop-In Panel

This QA Inspector randomly observed the “K” plate on the interior of the OBG. ABF/JV qualified welder Richard Garcia #5892 was observed welding temporary attachments to the plate for alignment. The weld surface and surrounding area was brought to temperature by the use of a gas torch and the preheat temperature was confirmed by QC prior to welding. QC Salvador Merino was noted monitoring the welding parameters during welding. The alignment and fit-up operations at this location was observed to be in progress and appeared to be in general conformance with the contract documents.

This QA Inspector randomly observed the repair welding operations performed by ABF/JV qualified welder Steven Davis (ID 7889) at the locations listed below. The welder was observed using the Carbon Arc Gouging (CAG) process to excavate the sites. Upon removal of the discontinuities, QC Inspector Salvador Merino performed Magnetic Particle Testing (MT) to ensure soundness of the metal and observed no relevant indications and recorded the dimensions of the excavations which are listed below. The welder was observed depositing metal by utilizing the SMAW process in the 3G vertical and 2G horizontal positions employing 3.2mm E7018-H4R electrodes drawing amperage of 127 as pertaining to ABF-WPS-D1.5-1000-Repair. This QA Inspector verified that the electrodes were obtained from a baking oven at the correct temperature and within acceptable exposure limits. The welder was observed cleaning the start/stop edges of the work utilizing small disc grinders and compressed air and restored the base metal to the original surface and ground smooth, and the welds to their specific profiles. The repairs were completed on this date and appeared to be in general conformance with the contract specifications.

13E PP124-E2.2-BW1 – y+40mm; 70mm in length, 30mm wide and 7mm deep.

13E PP124.5-E2.8-BW1 – y+490mm; 40mm in length, 15mm wide and 6mm deep.

13E PP123.5-E2.1-BF3 – y+210mm; 85mm in length, 18mm wide and 10mm deep.

Summary of Conversations:

Conversations were relevant to welding performed and information unique with each location.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By: Frey,Doug

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer